Key Points from Field Trip: 9/23/11 – MV and EB

Group Observations

Stop #1: Cascadel Ridge

- Concern about how to manage the fire regime, biodiversity p, patterns of plants and animals
- Less ladder fuels in the burned area
- There is a lot of seed source in the ground, it is very resilient to disturbance (example of pad he cleared with dozer only to come back to see it covered with pine seedling regeneration)
- Area smelled "spicy" noticed the fire plants that had come up, a rusted logging cable from past logging, but other than that not much human interaction to be seen, noticed a feeling of isolation with the place
- Noticed cow manure on the road
- Lots of dead and down timber
- Impressed that there is lots of growth. There is an impression of the life cycle.
- Gooseberries
- Water run-off from road
- Fire scarring low on trunks in 'cool burn' area
- Open understory. Not a lot of big trees
- Tree sprouts – cedar in the shade, pine in the sun
- Breeze

Stop #2 - Benedict Meadow (7S07 Road and 7S76 Road junction)

- Trail needed into meadow so overgrown with azaleas
- Really unique place looks like it is getting overgrown
- Azaleas growing around edge of meadow
- Lots of sugar pine
- Lots of downed trees
- Large variety of tree species
- Different place "wonderful perfection" here
- Water makes the difference
- Small conifer encroachment
- Treated forested area adjacent to meadow
- Downed wood debris
- More life, birds
- Look @ beautiful older growth sugar pine, old growth snags
- Saw a green frog, golden colored frog too, tree frogs
- Remnants of old road
- OHV tracks inside of meadow possibly from a quad
- Evidence of old fencing
- Range standards met
- Dead and dying trees near meadow edge. These will fall in the meadow and can help with erosion control
- Understory diversity at edge is higher than surround forest
- Azaleas are yellowing a bit
- Evidence of fire long ago

Areas of Agreement (Fire/Forest Management)	Areas of Disagreement (Fire/Forest Management)
Fire produces more new growth of tress and undergrowth shrub regeneration	
Fire may allow large tree structures left behind to thrive with less competition	
Fire results in increased food supply for wildlife (eventually)	
Cool understory burns create a more healthy and robust forest	There is more generation in the areas where there are hot burns. This provides forage for wildlife. It is good to integrate patches of severe fire.
Big picture view of watershed includes a larger mosaic pattern of low to high intensity fire areas in various states of growth and regeneration—part of the cycle	
Mosaic patterns of fire in the forest is good for wildlife, each type of area providing different things (food, shelter, dens, etc)	
Ladder fuel should be reduced. There are less ladder fuels in the cool burn areas. Treatment to reduce ladder fuel is important prior to burning.	
Maintain or improve biodiversity levels in plants and animals to pre-fire suppression practice levels	
Intermix between management and people: more concentrated management of forest where people are (WUI areas) versus less management in more remote areas	However, the FS's priorities are not necessarily to protect the WUI areas. Their priorities are to protect the forest from uncharacteristic, catastrophic wildfires. They are more in the business of protecting the forest from the house fires than protecting the houses from the forest fires.
Have flexibility for adapting treatments and management of the forest depending on monitoring	
More education on fire safety for tourists/forest users (ie, fire permits needed for camping; general education	Method of education—smoky bear vs. more balanced messaging that also conveys message that fire is not "bad" but a part of the forest process
	What are we aspiring to? Pre contact or pre human conditions? How can we know what prehuman conditions were? Ecological restoration isn't just desired ecological conditions…it includes people and has for 1000's of years. Dave response---more toward forest systems that function on the historical ecological condition that they used to and moving towards repositioning to adjust to

	things like climate change and social interaction with the forest.
Leave part of the forest to its own natural process. Maybe through a Research Natural Area (RNA)	Define "wild" and "natural". What are we aspiring to? Pre-human? Pre-contact? This needs to be established. RNA's may be too small to really provide true natural processes the space they need to happen.
More use of fire as possible within constraints of existing fuel loading and air quality control regulations	
A mix of stem sizes (tree sizes) is better than a single age stand	
Leave natural processes to themselves	There has been too much intervention – natural processes won't necessarily return to previous state. Fuel loads are higher leading to hotter, larger fires, not the short fire-return of pre-fire suppression time.
The Forest Plans should provide more flexibility to respond to conditions, opportunities, etc.	
Areas of Agreement (Recreation)	**Areas of Disagreement (Recreation)**
Better education of the public on how to use public lands. Welcome them and show them that they need to take care of it: pick up trash, etc. People need to be educated that they need a campfire permit for example if they are camping in an area outside a designated campground	
Diversity in hiking, biking and horseback riding. There has been a lot of attention on OHV use but attention is needed on muscle powered uses/non-motorized uses and how to integrate them. Suggestion, have areas where dispersed camping is accessible by non-motorized travel (trails with campgrounds or huts)	
More camping outside established campgrounds…manzanita is a huge impairment to recreational use and dispersed camping.	
Have, especially in lower areas of forest towards intermix—opportunities to enjoy and recreate in forest….closer to Bass Lake. Have more camping/solitude opportunities in more remote areas…(this is different from wilderness)	
More trailheads from North Fork proper---big economic opportunity…this area is special, a "blank spot on map"….not a NP, so free …that could connect to forests to go	

somewhere….horses, cyclists, hikers…..set up mechanism like cattle permit to establish Ostrander and Euro-style huts system in forest. Run by local people who have a permit….like cattle grazing permit….about 10 miles apart and tie them into wilderness and other public lands to create big beautiful loops.	
Intermediate recreation ops between developed camping and backpacking	
Having a network (and not extensive) of trails just in Willow Creek watershed…provides what community needs with FS mandate to connect pieces of trail for community to bike hike and recreate on (lots of checkerboard ownership in willow creek basin. Old trails on South Creek Bluff system that need to be maintained…a diversity in hiking, biking, horses…define what is idea for non-motorized interests, some energy has gone into OHV interests…integrate them---and designate areas that are foot access only and cross country skiing too.	
Road to Whiskey Falls that is well-maintained.	
Accurate properly labeled maps that match the road system/road signage Also better interpretive signage showing features, restoration projects, etc.	
Community forest resources---better communication of their availability and restrictions of use. Also better enforcement of improper use.	
Recreation: more recreation available for wheelchair accessibility	
Areas of Agreement (Meadows)	Areas of Disagreement (Meadows)
There needs to be better access to meadows with more developed recreational opportunities (like educational signage, work parties signs explaining restoration (like in Cold Springs and Jackass meadows) boardwalks, wheelchair access and trails)-- (constraint: limits on confidentiality of sacred sites)	Meadows should be relatively undeveloped recreational areas providing an opportunity for solitude and wilder feeling
“””””””””””””	Sacred sites & use restriction in meadows and other parts of forest: completely or certain times

	of year). There is a model for the Kuraks and Uraks up north---six rivers in Klamath NF…Brett Matzke will share this with us.
Fire is needed to maintain meadows.	
Increased enforcement of unauthorized use (ie, OH trucks in meadow)	
Overgrowth around Benedict meadow is azaleas (don't remove)	There should be a trail to provide better access into the meadow.
Meadows should be monitored to ensure that they are being held to appropriate grazing standards and other elements of range management	
Meadows would be a great opportunity to engage volunteers on restoration projects	Volunteers = concern…can take away jobs if work can be done for free (local economy).
Value of the azaleas (biodiversity) in riparian zone	
none of the meadow restoration plans involve removing woody vegetation except for encroaching conifers. Not every conifer in a meadow in encroaching and needs removal…some provide habitat, etc	
have meadows in area as healthy as possible by preventing headcuts introduced by human activities vs. natural activity.	
Follow best science of meadow grazing to keep them most healthy	Need to define what definition is of "best science" "good science" or latest science"
Native American present use (contemporary) is important to member, and must be integrated into planning.	
Value of diversity of wildlife and plant life	
Birds singing	

Forest Service Constraints/General Constraints
Be careful when looking at pre-hazard conditions—is that possible based on current science and climate conditions and history of fire suppression?
limits on educational signage and developed recreation opportunities related to confidentiality of sacred sites
Available funding for projects/restoration

Future Partnership Opportunities
Continue to build collaboration with residents and FSD and FS to creation of contiguous fuel breaks/tying to protect WUI area and forest
Opportunities for groups to be included in meadow restoration –potential is good, esp. w/ hand crews on projects like confer reduction. Native plant materials will be used for meadow restoration as needed.

Requests for More information (What)	**Who will Provide**
more info on what constitutes' "best science" to all from forest planning handbook	Judy Tapia
share model on cultural use related land closures from Six Rivers, Kuraks and Uraks up north with group.	Brett Matzke
Species movement related to climate change. Evapotranspiration rates from trees? Are we losing groundwater?	Marc Meyer

Questions and Answers

- Q - Has thinning helped Sugar pine come back? A- Some regeneration of sugar pine is noted in the burned area, blister rust is a disease that affects sugar pine and has taken a toll in this area
- Q: about the effects of the logging. White fir came back but what about pine. A - Pine takes a lot of sunlight to come back and understory was already shade tolerant (white fir) from fire suppression so that shaded out the pine and limited regeneration as well
- Q: Which trees use the most amount of water? A: Pines more efficient in water conservation cedar use a little more water. Collectively water is being taken up by all the "stems" trees
- Q about level of collaboration between Cascadel residents before the fire. A: They got together with neighbors to establish fire break, some fire safeing with shaded fuel breaks done before fire, treatments helped protect community and there is a continuation of collaboration. Corridors/breaks fire breaks helped stop Cascadel Fire. Residents worked with Fire Safe Council (non profit organization that works on private ground adjacent to National Forest lands). In the 1950s local ranchers started burning program with the State in this area and the Conservation District started the North Fork fuel break that went down to the Goode Place south and then

paralleled Mammoth Pool Road then up across Redinger to Castle Peak and connected to the Ponderosa Fuel break and then tied into area behind North Fork Dump

- Q: Can we get permission to clear land beyond our property border onto National Forest lands so that it is more fire safe? A: it is complicated since any ground disturbing projects/activities have to be disclosed to public and we have to follow laws and policy to adhere to proper disclosure of effects to the public. This is costly process for the FS and would be costly to landowners if they wanted the work to be done as hand piling for example is about $1000/acre plus the cost of the environmental analysis
- Q re fuel breaks: is that technique deployed in other places homeowner and FSC? A: Elissa has map of FSC Fuel Break locations in the area and can bring it to the next WCPC meeting.
- Q: Why don't we just stop development in the WUI? A: FS has some ability to comment on and provide input to urban planning, although FS does not have control over outcome on that

Next field trip(s)---Interest areas
NRA'S @ different elevations(marc can also provide this via slides)
Riparian…importance of woody debris, stream embeddedness (Sarah), good spawning habitat, water quality in terms of insect diversity)—Sarah can be a resource for this, too. Also Erosion mitigation areas…from roads…w/sedimentation issues
Meadow restoration and/or stabilization projects
protecting native plants….
Traditional Native American (includes contemporary use) in the general sense, not revealing sacred sites or confidential gathering places, etc.

FS Staff Presentations:

Stop #1

Fire and Thinning

- There has been hazard tree sales, grazing, 1990s commercial thinning, thinned out understory, activities to keep fires from spreading.
- Cascadel Fire and North Fork Fire last big fires in 60 years and both were human caused fires.
- By suppressing fire we eliminated a big player in managing the understory of the forest and other species became dominant.
- Timbers had high value so that is why timber was protected from fire by the Forest Service.
- After the railroad logging period there was a change in the composition and a shift to shade intolerant species black oak, white fir, incense cedar. Fuel loads are definitely higher. The historic fire regime was that it burned 1 out of every 7 years or so with a low intensity, frequent fire with low flame lengths.
- Sugar Pine Railroad from Pinedale logged the area in the mid-1920s 1925-1927 the big ponderosa pines were harvested and what is left is the 80 year old forest that is type converted from Ponderosa pine and Sugar pine to white fir and Incense cedar.
- Today more ladder fuels and higher biomass have caused a structural change in the forest.
- Spacing of trees is different, areas that had active fires have more heterogeneity, gaps and clumps of trees, small pockets of trees. In the majority of forests today it is not common to see this.
- More work needs to be done - example dense patch of ponderosa pine a Cascadel Road.
- Cascadel Road was recently brushed and looks nice.
- Forest Service fuel break work done from San Joaquin River up over Lions Point Forest, Road 81 Cascadel Ridge down to Douglas Station to Bass Lake to Goat Mountain down through Teaford, Thornberry to Vetter Ranch in Coarsegold. Fuel break boundary adjusted to Bass Lake Annex since FS can maintain this, not checkerboard ownership
- The normal fire regime is not something we can bring back easily considering the urban interface
- The Forest Service mandate is not to protect the urban interface. The FS mandate is to stop uncharacteristic catastrophic fire. Most fires start on private land and move onto public lands so really what we are doing is protecting the forest from people that live around it.
- The mandate is trying to have a healthy watershed that withstands uncharacteristic wildfire.
- We can't just use fire alone to restore, as the fires would burn hotter than naturally would. We need more structural and process oriented restoration that combines mechanical treatments with prescribed fire.
- Smoke management is also a part of the picture.
- Air quality control board wants to be a part of this collaborative process and do a presentation to the group.
- The public needs to be educated on the consequences of bringing fire back into the landscape
- The Forest Service has worked closely with SJ Air Board and they have working relationship; the Air Board understands where the FS is going with this restoration need.
- Urban intermix (inholdings within forest) is not the same as interface, which is line of city moving adjacent to forest. Communities within the Forest a different matter.

Comment [AS1]: Confirm notes with Mark Lemon

- Spotted owl Protected Activity Center is a dense stand, nice mix of diversity of habitat, Forest Service looking at increasing this type of heterogeneity in future projects. Untreated area at junction of 7S07 Road and 7S071 are more like conditions where before the thinning and Cascadel Fire.
- The Forest Service doesn't have enough money to do everything everyone wants. Primary responsibility is to protect forest from uncharacteristically catastrophic wildfire/fire hazard.
- Landowners need to responsible for their part.
- It will take a lot of intermediate steps before we can get to a point where we will be able to have small prescribed fires. It takes time to prepare National Forest land for many small fires.
- How to fire safe manzanita? Regrowth, mature manzanita either leave it mowing it, trim older bushes, manzanita does not burn very easily.

Climate Change, Fires, and Biodiversity

- Weather-wise, the temperature has increased throughout California by a couple of degrees F, both the highest temps and the lowest temps at night have increased a couple of degrees higher than 80 years ago.
- Precipitation has not declined, maybe dropped a little bit.
- Here in the Sierra Nevada fire return intervals have gotten much longer. Fire suppression has created a fire return interval that is high: 80-100 years. Also there are larger fires and more severe effects from these fires.
- Fires now have becoming bigger in size, more frequent and more severe. They are now burning very large areas - 1000+ acres or larger.
- Change due to the absence of fire has shown in general to reduce biodiversity.
- Data from plots in areas that have and have not burned - where the areas have not burned and there was a fuel treatment there is less diversity than a treated and burned area. Species diversity is higher where fire went through treated (mechanically) areas.
- Understanding the changes in climate are quite complex. Some wildlife and plant species are moving up slope to higher elevations and some are moving down. Species are definitely moving in response to temperature.
- Pine is not coming up as fast as before, oak is coming in more.
- Effects of climate change can be hard to see without good reference point.
- Patterns of large ponderosa pine important to wildlife most at risk are the larger trees. This pattern was evident in a study done in Yosemite National Park where large trees are dying at a higher rate, however there is higher reproduction in regeneration and hence more turnover. However large structures are dying and not being replaced as fast as they once did by regeneration.
- Higher temperatures and higher stress on large trees is leading to root disease, beetles and these trees can't sustain this stress.
- There is definite evidence of microclimate influence of the trees, the trees moderate temperature under their canopy.
- Large trees retain the most carbon. Carbon retention from small trees not as important for this function
- Marc Meyer has whole summary document on climate change effects in southern Sierra Nevada (we'll provide that). He also has information on changes in mammal distribution
- Birds in Sierra Nevada do track climate well, temp, climate or both they track and respond to those changes very well

- Story of seeing a road runner up on these bluffs at 5000 feet elevation
- Public agencies have just set aside landscape areas to study for research where not activities are present
- SJER, wilderness areas, RNAs Research Natural Areas different ecosystem types set aside for research and monitoring example Teakettle Experimental Forest (not been commercially harvested ever 1300 hectares) RNA can even have let burn policy if conditions are right
- Concern that experimental areas are too small to be reflective of larger landscape or too small and impacted from adjoining lands that are managed
- We need to get fire into the landscape. This has two challenges:
    - Managing the fires
    - Coordination with the Air District

Stop #2

<u>Roads, trails, and camping</u>

- Road use mostly for recreation access now, but road built for logging operations railroad grades then brought into larger road system
- Only well-traveled roads priority for FS maintenance
- In the past the timber sale purchaser would pay to maintain roads
- Forest has designated what is closed and what is open to motorized use
- Water quality issues from erosion and sedimentation of improperly placed trails and roads and issues with impacts (e.g. impacts to streams, archaeological sites) from unmanaged recreational use of the National Forest led to the need to assess motorized use forest –wide
- Road decommissioning is looked at the project level if specific project it can be identified to decommission segments of roads
- Roads serve dual purpose to get to timber and for recreation
- Travel Mangement Process connector trails and loop opportunities assessed
- Lots of opportunity for recreation, hunting photography
- Over 3000 tracks were evaluated under TM
- Majority of dispersed camping is off of numbered roads not cross country access so not huge issue with closures
- Motorized Vehicle Use Map (MVUM) is the use map that identifies authorized motorized routes (if route or road not on map it is not authorized from motorized use), trails will be identified with trail marker sign, roads have road number sign

<u>Thinning and management</u>

- Past evidence of fire over 100+ years ago?
- Most of forested conditions would be left, this is what it looks like with fire after a thinning treatment, looks like it needs to burn.
- Same kind of management but without fire
- Gertrude thinning from mid 2000s a thin from below fuels reduction project took out smaller diameter trees
- Prescription focused on taking out understory vegetation
- Need cover for wildlife leave large clumps of trees instead of equal distribution of leave trees evenly spaced

Meadows

- Meadows are crucial to overall ecosystem even though small percentage of land base
- Meadows are vital to water storage and release
- Meadows within the watershed vary in state of disrepair from historic impacts
- Watershed Improvement Needs (WIN) sites identified in late 1980s and 1990s
- In 2008 this data was input into geodatabase so that spatial location and detailed information about the degraded channels etc. could be catalogued in one location electronically
- Find meadows that could be stabilized
- Headcut is when the channel profile has an abrupt change in the vertical stability waterfall effect and can cut back and erode up the channel disrupting the hydrologic function and water storage benefits
- There are various methods to restore degraded meadows, plug and pond is one method
- Meadows in this area are too steep gradient >2% gradient you can run into problems with this technique most of our meadows are 4-10% gradient
- In the Willow Creek Watershed there is a plan to tackle all of the meadows that need stabilization including conifer removal and channel stabilization
- Focus is on meadows that you can get biggest bang for buck in terms of a little work that will go a long way; a lot of what is proposed is meadow stabilization not necessarily full on restoration
- Welcome community group involvement in working on the meadows